Liquid-crystalline composition

Abstract

The present invention relates to a liquid-crystalline composition which comprises, as components

A) a liquid-crystalline mixture comprising as least one compound selected from the group consisting of the compounds of the formula Ia

$Z^1-Y^1-A^1-Y^3-M^1-Y^4-A^2-Y^2-Z^2$ Ia

and of the formula Ib

$Z^3-Y^5-A^3-Y^7-M^2-P$ Ib,

where the variables, independently of one another, have the following meanings: P is hydrogen, C_1-C_{15}-alkyl or a $-Y^8-A^4-Y^6-Z^4$ group, Z^1 to Z^4 are polymerizable groups, Y^1 to Y^8 are linking groups, A^1 to A^4 are spacers and M^1 and M^2 are mesogenic groups,

B) if desired, further additives selected from the group consisting of photoinitiators, reactive thinners and diluents,

C) if desired, further additives taken from the group consisting of antifoams and deaerators, lubricants and flow auxiliaries, thermally curing or radiation-curing auxiliaries, substrate wetting auxiliaries, wetting and dispersion auxiliaries, hydrophobicizing agents, adhesion promoters and auxiliaries for improving the scratch resistance,

D) if desired, further additives selected from the group consisting of dyes and pigments, and

E) if desired, further additives selected from the group consisting of light, heat and/or oxidation stabilizers.

A detailed definition of the variables Z^1 to Z^4, Y^1 to Y^8, A^1 to A^4, P, M^1 and M^2 is given in the description.

The present invention furthermore relates to the use of a liquid-crystalline composition of this type as a printing ink, for printing or coating substrates, in electro-optical

components, for counterfeiting-proof marking of articles and for the production of films or coatings which selectively reflect light in the wavelength range from 250 to 1300 nm, to a polymer or polymerized film obtained by polymerizing a liquid-crystalline composition according to the current invention and to the use of a polymerized film of this type as an optical filter, polarizer, decoration, counterfeiting-proof marking or reflection medium for the selective reflection of radiation in the wavelength range of 250 to 1300 nm, to a process for printing or coating the substrate using a liquid-crystalline composition according to the invention, and to substrates to which a liquid-crystalline composition according to the invention or a polymer or polymerized film according to the invention has been applied or which has been printed or coated by the process according to the invention.